Modern Simple Mathematics

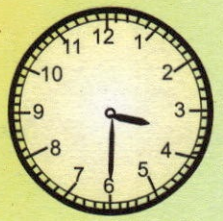
PART - III

By

Council for Preparation Of Textbooks

Translated By

Irfan Ahmed Siddiqui



FOREWORD

The books are frequently revised and updated to meet the challenges of the fast changing world in the fields of science and technology , new developments in the methodology of teaching and growing needs of the students to understand the subject through simple, lucid and illustrative method.

The book in your hands i.e. Modern Simple Mathematics is the part of our plan to revise all our textbooks.

The thoughts and views which have a direct influence on the lives of the students and are associated with the real purpose of their lives have been given due importance and consideration in the preparation of this book.

Keeping in mind the general and prevailing perception among the students, the parents and of course the teachers that Mathematics is a dull and boring subject, we have designed this book so as to allay such Maths phobia among these people. Moreover, efforts have been made to clear each and every point by profusely illustrating the book with sufficient solved examples, graphics and instructions for teachers wherever necessary The exercises have been designed to relate them with the day-to-day needs of the students.

We acknowledge all those whose kind cooperation, guidance and assistance have culminated in the production of this book.

Suggestions and comments are highly appreciated and will be thankfully acknowledged.

New Delhi
20.08.2013

Mohd. Ashfaque Ahmed
(Incharge)

TEACHING MATHEMATICS

The need and utility of Mathematics in our day-to-day life is universally acknowledged. No one can eventually do without the basic concept of Mathematics - whatsoever profession one is in.Everyone has to deal, more or less, with personal and family budget,marketing, mutual give-and-take, measurement, Zakat and Ushr inheritance and other obligations. That is why the practice of teaching basic Mathematics to little children from the very beginning has been in vogue for centuries. And in this age of science and technology this need has assumed much more importance. Inventions, industries and scientific developments in the various fields have left an abiding influence on the very course of our life. Whether it is industry or handloom, business or agriculture, science or technology, the knowledge of Mathematics is required at every step. Thus for the success of life it is essential that every pupil is taught Mathematics up to the secondary level.

Not only to meet practical needs of life, the knowledge of basic concepts of Mathematics is necessary to gain mastery over different subjects, to study science and social sciences and even the books of language and to understand them quite well.

Children do require the knowledge of counting, addition, subtraction and other details of weighing and measurement in doing work at home and school, in knowing the quantity and number , shape and size of things, in business transactions, in games and sports and in satisfying their curiosity at every step in their day-to-day life. For the fulfilment of this need it is necessary to teach them Mathematics. This is the most important subject next only to the basic knowledge of Islam and the mother tongue. Thus it should be given special attention accordingly.

The real purpose of teaching Mathematics at the elementary level is to gradually develop so much awareness in children that they may solve mathematical problems in their day-to-day life, ascertain the quantity and number as well as shape and size of the things they come across, handle business transactions, have suficient knowledge of weighing and measurement as well as time and distance, and make further study in Mathematics. To achieve this purpose it is inevitable to teach Mathematics at the elementary level.

(Late) Afzal Hussain, M.A.; L.T

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CHAPTER - 1

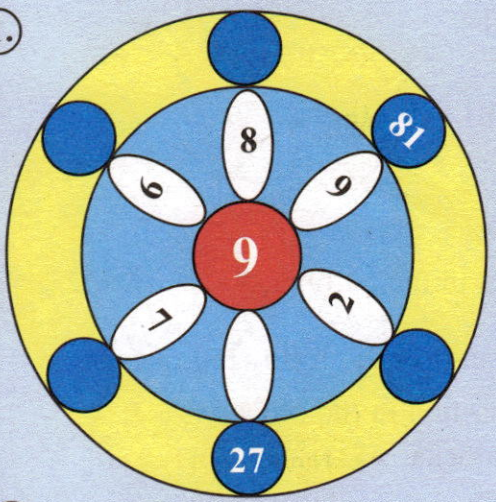
Revision

EXERCISE-1.1

Tables: Oral

Fill in the blanks with the help of tables:

1.



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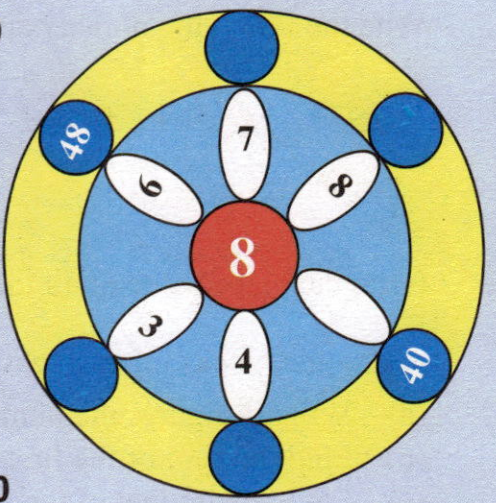

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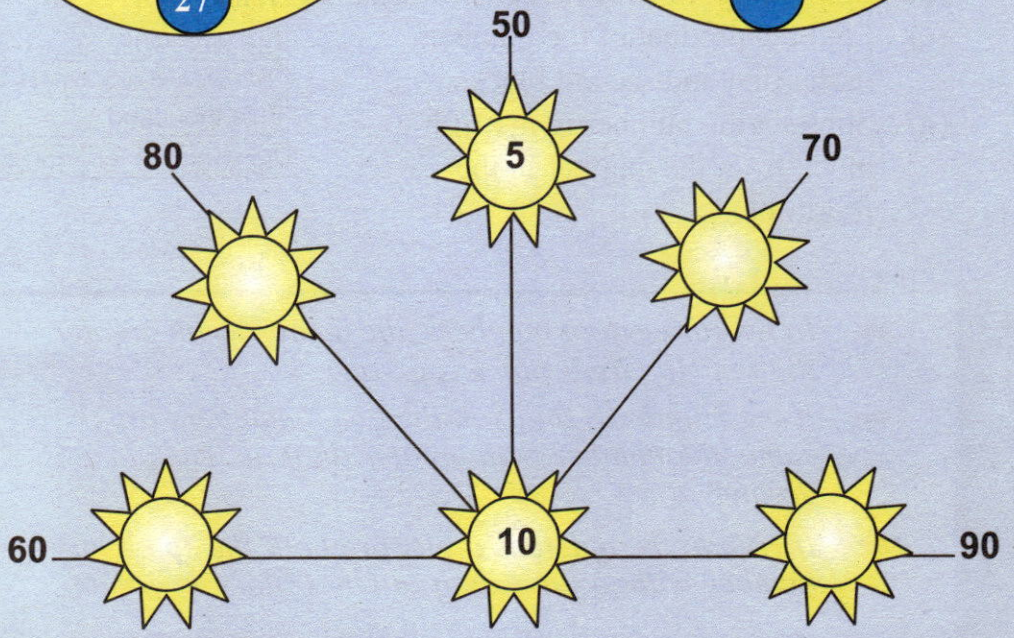

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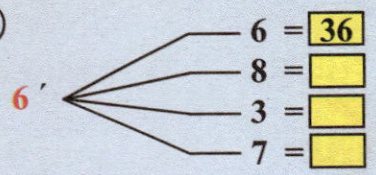

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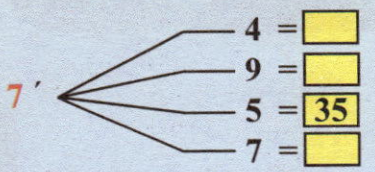
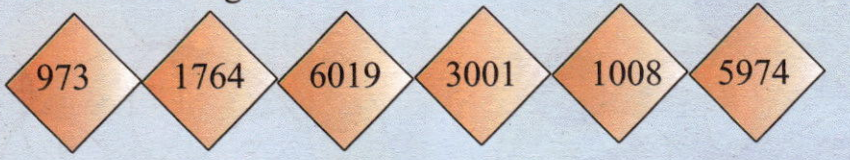


EXERCISE-1.2

1. Write the following numbers in words:



2. Write the place value of all the digits in the number '4759'.

3. Using the blocks on the right side, answer the following questions:

(a) Write in figures the numbers written in the blocks.

(b) Find the sum of the first four blocks.

(c) Find the product of the numbers in the first and second blocks.

(d) Subtract the number in the fifth block from the number in the fourth block.

Nine	(1)
Seventy-nine	(2)
Nine hundred sixty-three	(3)
Five thousand	(4)
Three thousand Three Hundred eighty-one	(5)

REMEMBER

- *In two-three digit numbers, the number with greater digit at Hundreds place is greater*
- *If the Hundreds digits in the given numbers are the same, the number with greater digit at Tens place is greater.*
- *If Hundreds and Tens digits are both the same, the number with greater digit at Ones place is greater*

4. Write the numbers in ascending and descending order, formed by the following digits:

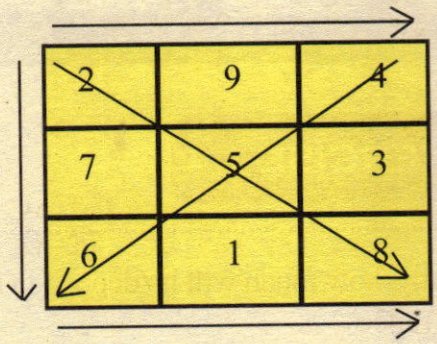
(A) 8, 6, 4 (B) 3, 9, 5

5. Write the greatest and the smallest 3-digit numbers.

EXERCISE-1.3

Number Game: Add the numbers of following puzzle as directed

2
+ 7
+ 6



2 + 9 + 4 = 15
4 + 5 + 6 = 15
2 + 5 + 8 = 15
6 + 1 + 8 = 15
9 + 5 + 1 = 15

1. From left to right
   Sum of first row = 2+9+4 = 15
   Sum of second row = ----------
   Sum of third row = ----------
2. From top to bottom (Downward)
   Sum of first row = 2+7+9 = 15
   Sum of second row = ----------
   Sum of third row = ----------
3. From upper left corner to lower right corner (Diagonally)
   Sum of three digits = 2+5+8 = 15
4. From upper right corner to lower left corner (Diagonally)
   Sum of three digits = ----------

From above puzzle, we observe that the sum of digits of each row, column and diagonal is same as 15.

5. Complete the following puzzles with suitable digits so that the sum of each row, column and diagonal should be same:

21		19
	18	
17		15

(A)

14		12
		13
	15	8

(B)

		57	
	55		66
33	55	46	65
67	44	54	

(C)

EXERCISE-1.4

1. If Asghar deposits 5 rupees daily, how much will he deposit in a week? How much is it short of fifty rupees?
2. After exams, the school was closed for 3 days from Monday. On which day will the school reopen?
3. Rahmat went home from Hostel on Sunday evening and returned on Thursday evening. For how many days was he on leave?
4. Students of a school went on picnic on Sunday and returned the third day. Which day was it?
5. A pencil costs 75 paise. How much will 3 pencils cost?
6. Nine passengers of a bus purchased an orange for 95p each. How much money did the orange seller get?
7. Sajid bought one kilogram of ghee at the rate of 350 rupees a kilo and gave a five hundred rupee note to the shopkeeper. How much money did the shopkeeper return to sajid?
8. Measure with a scale the length and breadth of your Mathematics book?
9. If a shirt needs 2 metre cloth, how many shirts can be prepared with 12 metre cloth?
10. A matchstick is 4 cm long. How long will 50 sticks be if kept end to end?
11. Half Kg flour is consumed in a house daily. How much flour will be comsumed in 8 days?

CHAPTER - 2

Reading and writing of 5-digit numbers

You have learnt reading and writing of 3 and 4-digit numbers. You can also tell the smallest and the largest 3 and 4-digit numbers.

You know that the largest 3-digit number is 999 and largest 4-digit number is 9999. You also know that if one is added to them we get1000 and 10000 respectively. You can write 7000, 8000 and 9000.

If 3 zeroes are written to the right of 10, we get 10 000 or Ten thousand, similarly if 3 zeroes are written to the right of 11, 12, 13,..... we get 11000, 12000, 13000, ... (and so on).

11 000 Eleven thousand

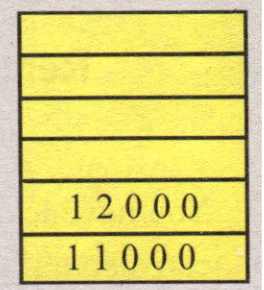
12 000 Twelve thousand

13 000 Thirteen thousand

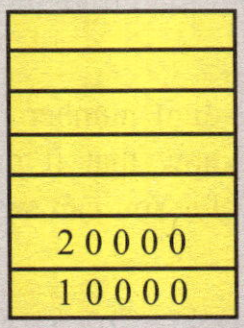
Remember: To write ten thousand we put four zeroes next to 1 (right of 1) 10000. This is the smallest 5-digit number.

EXERCISE-2.1

1. Fill in the blanks adding 1000 in each step upward.
   Also say loudly what you write.



2. Fill in the blanks adding 10000 in each step upward.



3. Fourteen thousand students appeared in an examination. Write this figure in words.

4. There are thirty thousand words in an English book and eighteen thousand words in G.K. Book. Write these numbers in figures.

Example : Write Thousands, Hundreds, Tens and Ones of the number 48,724.

Solution: We can write

$48,724 = 40,000 + 8,000 + 700 + 20 + 4$

Ten Thousand	Thousands	Hundreds	Tens	One
4	8	7	2	4

Or

Thousands	Hundreds	Tens	One
48	7	2	4

So, there are 4- Ten thousands, 8- Thousands, 7-Hundreds, 2-Tens and 4- Ones.

Note: *From Thousands place onwar ds each place can hve a two-digit number, hence it is better to say that there are 48-Thousands, 7-Hundreds 2-Tens and 4 Ones*

5. Write the following numbers according to the above solve examples

   (a) 80543 (b) 32817 (c) 48064 (d) 29138 (e) 23704

   (f) 19276 (g) 71850

6. Write the smallest and the greatest 5-digit numbers in both numerals and words.

Remember:

Ten Ones	=	One Tens
Ten Tens	=	One Hundreds
Ten Hundreds	=	One Thousands

EXERCISE-2.2

1. **Write the following numbers in words:**

   (a) 19751 (b) 2970 (c) 29175 (d) 99259 (e) 85482

2. **Write the following numbers in figures:**

   (a) One hundred thirteen (b) Eight hundred ninety-eight

   (c)Two thousand thirty seven (d) Twenty-four thousand eight hundred

   (e) Seventy-five thousand seven hundred three

3. A student wrote fifty thousand thirty as 5030. Whether it is correct or not? If not, write correctly.
4. Write the greatest and smallest number formed by digits 7, 6, 5, 0 and 3.
5. Make as many numbers as possible by using digits 2, 3 and 5 only once in each number. Arrange them in ascending and descending orders. Also find the difference between the greatest and the smallest numbers so formed.

PLACE VALUE

Value of a digit is shown by the place of it in a number. A digit written at different places has different values. See the following examples:

In 43527 the place of 7 is at *Ones*. Hence its value is = 7

In 45673 the place of 7 is at *Tens*. Hence its value is = 70

In 23748 the place of 7 is at *Hundreds*. Hence its value is = 700

In 47530 the place of 7 is at *Thousands*. Hence its value is = 7000

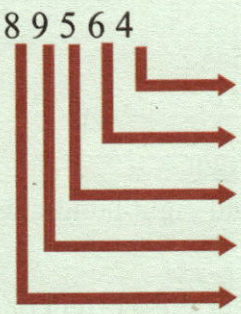
In 78356 the place of 7 is at *Ten Thousands*. Hence its value is =70000

You have noticed that 7 changed its value as per its place.

So, the value of a digit is by virtue of the place it is written.

EXERCISE-2.3

Example: Place value of each digit is shown as under:



4 Ones	or	4
6 Tens	or	60
5 Hundreds	or	500
9 Thousands	or	9000
8 Ten Thousands	or	80000

1. Write the place value of each digits in the following numbers according to the solved example:

(i) 546, (ii) 7823, (iii) 61452, (iv) 21359

2. Write the place value of the underlined digit:

(i) 21566, (ii) 32720, (iii) 45068, (iv) 56072

3. Write the place value of both 2s in the number 20425.

CHAPTER - 3

ADDITION

Safwan did the following sum, thus-

643		643
37	and Zeeshan did it like	37
589		589
2		2
1622		1271

If you observe these two sums, you find that Zeeshan did it correctly and hence his answer 1271 is correct. What mistake did Safwan do? He did not care while writing numbers in column. He must have written digits having the same place value in the same column.

We will never get correct answer if we don't care about the place value of the given numbers.

Th	H	T	O
	6	4	3
		3	7
	5	8	9
			2
1	2	7	1

REMEMBER

- **While adding always write Ones under Ones, Tens under Tens, Hundreds under Hundreds, Thousands under Thousands and so on.**
- **Digit of each place is added individuallyAnd if we get a 2-digit number, we write only one digit and carry another to the next place.**
- **In addition, either add upward or downward, the result will be the same.**
- **Method of adding large numbers is the same as that of small numbers.**

Now see the following examples:

Example (1) : 1976 + 5784 + 1632

Solution:

	Th	H	T	O
	(2) ←	(1) ←	(1) ←	
	1	9	7	6
+	5	7	8	4
+	1	6	3	2
	9	(2) 3	(1) 9	(1) 2

Result is: 9 3 9 2

Explanation:

Step-1: First we add Ones 6 + 4 + 2 = 12 i.e. 2 ones and 1 tens. 2 is written at Ones place and 1 (Tens) is carried to Tens place. (This is carry)

Step- 2: Now add Tens 7 + 8 +3 + 1 (carry) = 19. We write 9 in Tens place and carry 1 (Hundreds) to Hundreds place.

Step-3: Add Hundreds 9 +7 + 6 + 1 (carry) = 23

23 Hundred or 20 Hundreds and 3 Hundreds

20 Hundred or 2-Ten Hundreds or 2 Thousands carried to thousands place and 3 Hundreds written under Hundreds place.

Step-4: Now finally we add Thousands 1 + 5 + 2 (carry) = 9. We write it at Thousands place.

Now addition is complete and the sum is 9392.

Example (2): 3786 + 2947 + 6733

Solution:

	Th	H	T	O
	(2)	(1)	(1)	
	3	7	8	6
+	2	9	4	7
+	6	7	3	3
	13	4	6	6

Explanation:

(I) Sum of Ones $6 + 7 + 3 = 16$. We write 6 at ones place and carry 1 to tens place.

(ii) Sum of Tens including carried $1 = 1 + 8 + 4 + 3 = 16$.
6 is written at Tens place and 10 Tens or 1 Hundred carried to Hundreds place.

(iii) Sum of Hundreds including carried1
$= 1 + 7 + 9 + 7 = 24$ (Twenty four hundreds)
or 20 Hundred = (Two thousand) and 4 Hundreds. 4 is written under Hundreds and 2 carried to Thousands place.

(iv) Sum of Thousands (including carried 2)
$= 2 + 3 + 2 + 6 = 13$
3 is written at thousands place and Ten thousands or 1 Ten thousand written at Ten thousand place.
So, the answer is 13466.
You can add without actually writing carried numbers in the column. Thus -

$$\begin{array}{r} 3786 \\ +2947 \\ +6733 \\ \hline 13466 \end{array}$$

EXERCISE-3.1

Find the Sum:

1. $\begin{array}{r} 44444 \\ +\ 4444 \\ +44444 \\ \hline \end{array}$

2. $\begin{array}{r} 6666 \\ +\ 3333 \\ +33333 \\ \hline \end{array}$

3. $\begin{array}{r} 12034 \\ +30078 \\ +54653 \\ \hline \end{array}$

4. $\begin{array}{r} 2845 \\ +33213 \\ +18376 \\ \hline \end{array}$

5. $\begin{array}{r} 34287 \\ +23506 \\ +14571 \\ \hline \end{array}$

6. $\begin{array}{r} 60219 \\ +26597 \\ +\ 432 \\ \hline \end{array}$

Write the following in column and add:

7. 7798 + 91344

8. 21 + 9562

9. 7 + 172 + 4651

10. 990 + 9008 + 67097

11. 68067 boys and 27987 girls visited the zoo in August. Find the total number of children who visited the zoo?

12. A cloth mill manufactured 49549m cloth in January and 73911m in February . Find the total length of cloth produced in the two months.

13. An electric bulb manufacturing company produced 57308 bulbs in a year. Another company produced 1350 bulbs and yet another company produced 17822 bulbs. Find the total number of bulbs produced by them together.

14. On Eid-ul-Fitr 32715 local people and 28527 outsiders performed Eid Prayers in an Eid Gah. Find the total number of people offering Eid Prayers.

15. A man spent Rs. 19557 on charity and left Rs. 10825 for his family. How much money did he have?

16. In Rahmat Nagar 21524 persons live in brick-built houses, 22802 in mud-built houses and 19662 in huts. Find the total number of persons living in Rahmat Nagar.

CHAPTER - 4

Subtraction

You have already learnt subtraction of 4-digit numbers (up to 9999). The same method is followed even in the subtraction of higher numbers.

Example (1): Subtract 27432 from 53286

Solution:

	T Th	Th	H	T	O
	borrow1 (10)	borrow1 (10)			
	5 (4)	3 (12)	2 (2)	8	6
	2	7	4	3	2
Difference ➡	2	5	8	5	4

Subtract Ones from Ones, Tens from Tens, Hundreds from Hundreds and so on, borrow wherever necessary, write the result under respective columns.

Example (2): Subtract 14225 from 20056.

Solution:

	T th	Th	H	T	O
	1				
	~~2~~ 1	~~0~~ 10	~~0~~ 10	5	6
	1	4	2	2	5
	0	5	8	3	1

Explanation:

Step I. Subtract Ones (5) from Ones (6) ➡ 6-5 = 1

Step II. Subtract Tens (2) from Tens (5) ➡ 5-2 = 3

Step III. Subtract Hundreds (2) from Hundreds (0) It is not possible.

So borrow from the left number. Since it too has nothing, it will borrow from its left i.e. From Ten Thousand and now Thousands has Ten Thousands. Now Hundred can borrow one (Thousand) from Thousands to become Ten Hundreds. At Thousands place there will be 9. Subtract 10 Hundred -2 Hundred ➡ 10-2 = 8

Step IV . Subtract Thousands (4) from Thousands (9) ➡ 9-4=5

Step V. Subtract Ten Thousands (1) from Ten Thousand (1) ➡ 1-1= 0

Your result is 5 8 3 1

Checking: To check your answer do opposite of subtraction i.e. Addition.
Add your result 5831 to the subtracted number 14225.
If you get the number from which you subtracted, your answer is correct.

$$\begin{array}{r} 14225 \\ +5831 \\ \hline 20056 \end{array}$$

EXERCISE-4.1

Find the difference:

1. $\begin{array}{r} 95734 \\ -78623 \\ \hline \\ \hline \end{array}$ **2.** $\begin{array}{r} 44225 \\ -35216 \\ \hline \\ \hline \end{array}$ **3.** $\begin{array}{r} 60872 \\ -55555 \\ \hline \\ \hline \end{array}$ **4.** $\begin{array}{r} 67400 \\ -35644 \\ \hline \\ \hline \end{array}$

From questions 5 to 8 write the numbers in columns and subtract:

5. 9562 – 319 **6.** 4657 – 275 **7.** 57265 – 2523 **8.** 36782 – 17861

9. A school library has 37875 books. How many more books should be purchased to complete the number of books 40,000.

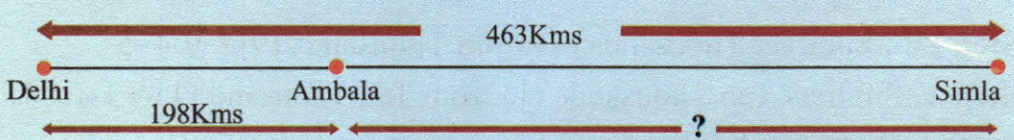
10. Subtract forty-eight thousand nine hundred ninety-nine from fifty thousand.

11. Arshad bought a radio for Rs.1328 and gave 14 one hundred rupee notes to the shopkeeper. How much money did the shopkeeper return to him?

12. Fareed has Rs. 25000. He bought a scooter for Rs. 23625. How much money is left now?

13. A contractor manufactured 90602 bricks, out of which 66922 were sold. How many bricks are left now?

14. Ambala is enroute Delhi to Simla. If the distance between Delhi and Simla is 463 Kms and between Delhi and Ambala it is 198 Kms find the distance between Ambala and Simla.



CHAPTER - 5

Table of Multiplication

If in Darsgah-e-Islami morning prayer there are 4 rows of 10 students each, how many students are there in all?

Solution:

I Method: By addition

First Row – 10 Students
Second Row – 10 Students
Third Row – 10 Students
Fourth Row – +10 Students
Total (sum) = 40 Students (on adding)

II Method: By Multiplication

Number of students in each row = 10
No. of rows = x 4
Total no of students = 40

III Method: Using Table of 10.

You can easily give correct answer by reading Table of 10 up to 4 i.e. 10 fours are 40. This is the advantage of Table that save both time and space. You, therefore, should learn by heart Table up to 20. There are two methods of making Tables. Simply go on multiplying the numbers by 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 and write the product every time. You've got the Table of the desired number.

Here are some examples.

11 x 1 = 11	12 x 1 = 12
11 x 2 = 22	12 x 2 = 24
11 x 3 = 33	12 x 3 = 36
11 x 4 = 44	12 x 4 = 48
11 x 5 = 55	12 x 5 = 60
11 x 6 = 66	12 x 6 = 72
11 x 7 = 77	12 x 7 = 84
11 x 8 = 88	12 x 8 = 96
11 x 9 = 99	12 x 9 = 108
11 x 10 = 110	12 x 10 = 120

x1	x2	x3	x4	x5	x6	x7	x8	x9	x10
13	26	39	52	65	78	91	104	117	130
14	28	42	56	70	84	98	112	126	140
15	30	45	60	75	90	105	120	135	150
16	32	48	64	80	96	112	128	144	160
17	34	51	68	85	102	119	136	153	170
18	36	54	72	90	108	126	144	162	180
19	38	57	76	95	114	133	152	171	190
20	40	60	80	100	120	140	160	180	200

EXERCISE-5

1. We get 2 fifty paise coins for 1 rupee. Find how many 50p coins will we get for –

(a) 10 rupees (b) 12 rupees (c) 13 rupees (d) 14 rupees

2. A tin can have 4 Kg of Ghee. How much Ghee will be there in –

(a) 13 tins (b) 14 tins (c) 15 tins

3. Length of a saree is 5m. Find the total length of –

(a) 11 Sarees (b) 15 Sarees

4. Solve with the help of Table.

(i) 11 x 6 =	(ii) 15 x 6 =	(iii) 12 x 7 =
(iv) 13 x 7 =	(v) 14 x 7 =	(vi) 11 x 7 =
(vii) 15 x 7 =	(viii) 12 x 7 =	(ix) 13 x 8 =
(x) 14 x 8 =	(xi) 11 x 8 =	(xii) 15 x 8 =

5. Hamid bought 10 stamps of 15 paise each from a Post Office. How many paise did he spend in all?

6. A piece of chalk costs 15p each. Find the cost of 6 pieces of chalk.

7. If a box has 12 pens, how many pens will there be in 6 such boxes?

8. You used 14 pages daily in solving mathematics problems. How many pages did you use in a week?

9. A cycle rider goes 13 kms in an hour. How long will he go in 5 hours?

10. A boy runs 9 m per second in a race competetion. How long will he run in 14 seconds?

11. How many Tens are there in 900?

12. I have 15 notes of 10 rupee each. How much money do I have?

13. Sajid reads 5 pages of the Holy Qur'an daily. How many pages will he read in 14 days?

14. Mahmood performs 12 Raka'ats of Zuhr prayer daily. How many Raka'ats will he perform in a week?

CHAPTER - 6

Multiplication

You already know the method of multiplication. "X" is the symbol of multiplication.
The numbers which are multiplied are called MULTIPLICANDS and the result is called PRODUCT

$$\begin{array}{r} 14 \\ \times\ 6 \\ \hline 84 \end{array} \quad \begin{array}{l} \longrightarrow \text{MULTIPLICANDS} \\ \longrightarrow \text{PRODUCT} \end{array}$$

14 x 6 is also read as FOURTEEN INTO SIX
(INTO is indication of multiplication)

14 x 6 = 84 is read as FOURTEEN INTO SIX IS EQUAL TO EIGHTY-FOUR

You have learned about the multiplication of two or more than two-digit numbers by a single digit. Now we learn multiplication by two - digit numbers.

Multiplying by 10 : Look at the examples below:

$$\begin{array}{r} 3 \\ 10 \\ \hline 30 \end{array} \qquad \begin{array}{r} 13 \\ 10 \\ \hline 130 \end{array} \qquad \begin{array}{r} 113 \\ 10 \\ \hline 1130 \end{array}$$

(Zero to the right of 3) (Zero to the right of 13) (Zero to the right of 113)

or

3 x 10 = 3x1Ten = 3 Tens = 30
13x 10 = 13 x1 Ten = 13 Tens = 130
113 x10 = 113x1 Ten = 113 Tens = 1130

We observe that while multiplying by 10 only zero is put to the right of the original number which is to be multiplied by 10, thus

Find the product:

85 x 10 = ☐ | 15 x 10 = ☐
490 x 10 = ☐ | 106 x 10 = ☐

Multiplying by 20, 30, 40, 50, 60, etc.

Example: 1:- Multiply 147 by 60.

Solution: 147 x 60 = 147 x 6 Tens
= (147 x 6) Tens
= 882 Tens
= 8820

Example: 2:- Multiply 351 by 30.

Solution: 351 x 30 = 351 x 3 Tens
= (351 x 3) Tens
= 1053 Tens
= 10530

If we have to multiply by 20, 30, 40 ....., simply multiply by 2, 3, 4, ... and put a zero to the extreme right.

EXERCISE-6.1

Solve:

1. 17 x 30 = ☐
2. 532 x 40 = ☐
3. 607 x 50 = ☐
4. 325 x 90 = ☐
5. 955 x 60 = ☐
6. 846 x 70 = ☐

Multiplying by 100 and 1000.

Example 1:

54 x 100 = 54 x 1 Hundred = 54 Hundreds
= 5400

Example 2:

17 x 1000 = 17 x 1 Thousand = 17 Thousands
= 17000

Do as shown in the above example:

a. 15 x 100 = 15 x 1 Hundred = 15 Hundreds = 1500

b. 17 x 1000 =

c. 18 x 1000 =

d. 47 x 100 =

e. 54 x 1000 =

f. 27 x 100 =

g. 35 x 1000 =

h. 70 x 100 =

i. 70 x 1000 =

Multiplying by 10, 100, 1000, 10000 is very easy. Copy the number and put one, TWo,Three or Four zeroes respectively to extreme right of the numbers.

EXERCISE-6.2

Find the Product:

1. 15 x 1000 = ☐

2. 856 x 100 = ☐

3. 761 x 100 = ☐

4. 294 x 1000 = ☐

5. 405 x 1000 = ☐

Example: Multiply 346 by 38

346 x 38 or 346 x 8 Ones = 2768 or 346 x 3 Tens = 346 x 30 = 10380

$$\begin{array}{r} 346 \\ \times\ 38 \\ \hline 2768 \\ +10380 \\ \hline 13148 \end{array}$$

2768 (multiplied by 8 Ones)

+10380 (multiplied by 3 Tens or 30)

13148 add

Explanation:

We first multiply 346 by 8 ones and then by 3 tens (or 30) and add the two products.

346 x 38 = 346 x 8 = 2768

346 x 30 = 10380

add = 13148

Easy Method:

(i) Write numbers in column

$$\begin{array}{r} 346 \\ \times\ 38 \end{array}$$

(ii) First multiply by Ones (8) and write the product

$$\begin{array}{r} 346 \\ \times\ 8 \\ \hline 7268 \end{array}$$

(iii) Now multiply by Tens (3) and start writing product from Tens column, put a zero at Ones column.

(iv) Now add these two lines (products); you will get the answer.

	Tth	Th	H	T	O	
Step I			3	4	6	write in column
				3	8	
Step II		2	7	6	8	Multiply by Ones
Step III	1	0	3	8	0	Multiply by Tens
Step IV	1	3	1	4	8	Add two products

Answer = 13148

EXERCISE-6.3

Multiply:

1.	89 by 53	**2.**	575 by 88	**3.**	1043 by 59
4.	1704 by 35	**5.**	358 by 93	**6.**	213 by 25

7. There are 20 Almirahs in a library. Each Almirah has 250 books. How many books are there in the library?

8. A bag of rice weighs 35 Kgs. How much will 528 such bags weigh?

9. Cashier of a bank counted 128 notes of 50 rupees. How much money did he count?

10. On Bareilly -Agra road there are 54 trees at every kilometre. If the distance between Bareilly and Agra is 213 km, how many trees are there on the road?

11. 75 sweaters were pepared for distribution among the poor. If 425 gm of wool was used in each sweater, how much wool was needed to prepare all these sweaters?

12. 1500 students of a school collected 15 rupees each for poor students fund. How much money was collected by them?

13. Aslam memorises 25 Ayats (verses) of the Holy Qur'an in a week. How many verses will he memorise in 156 weeks?

Multiplication of 3 numbers

Example: Find the product, 9 x 12 x 16

Solution : First we multiply 9 & 12, then multiply the product (9x12=108) by 16.

Step 1: 12 x 9 =108

$$\begin{array}{r} 12 \\ \times\ 9 \\ \hline 108 \end{array}$$ Step I

Step 2: 108 x16 = 1728

$$\begin{array}{r} 108 \\ \times\ 16 \\ \hline 648 \\ 1080 \\ \hline 1728 \end{array}$$ Step II

If we change the order of numbers. We observe that there is no change in product

Step 1: 12 x 16 =192

$$\begin{array}{r} 12 \\ \times\ 16 \\ \hline 192 \end{array}$$ Step I

Step 2: 192 x 9 = 1728

$$\begin{array}{r} 192 \\ \times\ 9 \\ \hline 1728 \end{array}$$ Step II

So, we conclude that there is no change in product, if we change the order of given numbers in multiplication.

EXERCISE-6.4

Find the product:

1. 5 x 9 x 4
2. 56 x 23 x 49
3. 8 x 54 x 152
4. 18 x 12 x 230

CHAPTER - 7

Division

Dividing two-digit number by one-digit number

You have 15 bananas to distribute among 5 students; Rashid, Majid, Khalid, Huzaifa and Hasan. How will you do?

15 bananas, Give one banana to each, remaining = 15-5 = 10
10 bananas, give one banana to each, remaining = 10-5 = 5
5 bananas, give one banana to each, remaining = 5-5 = 0
How much did everyone get ➡ 3 bananas
(Since you distributed it in 3 Times)

15 distributed among 5; we have to distribute 3 Times.

Remember

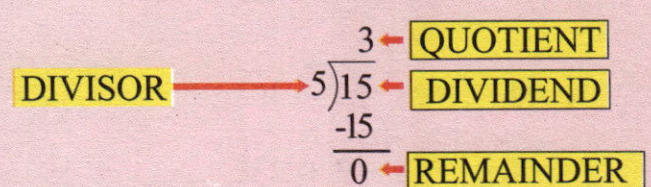
Successive subtraction in simpler terms is called Division [another word for Equal Distribution].

This you can write thus

or

$$5\overline{)15}\quad 3,\ -15,\ 0 \text{ left}$$

15 distributed among 5 gives 3 with zero left
15 divided by 5 gives 3 with zero remainder



If something is distributed (divided) equally among someones, we always get zero as remainder.

Learn & Remember:

- Adding the same number again and again is also MULTIPLYING.
- Subtracting the same number again and again from a given number till we get zero or less than divisor is DIVISION.
- Addition, Subtraction and Multiplication start from right side i.e. Ones but division begins from left side.

Example:- 36 ÷ 3

Solution: Step1- First write 36 ÷ 3 in the form of $3\overline{)\,36}$

Step2- There are 3 Tens and 6 ones in 36
First of all divide 3 tens by 3. We get 1 as Quotient.

$$\begin{array}{r} 1 \\ 3\overline{)\,36} \\ -3 \\ \hline 0 \end{array}$$

Step3- Now copy 6 ones besides 0 and divide by 3.
We get 2 as quotient and remainder Zero.

$$\begin{array}{r} 12 \\ 3\overline{)\,36} \\ -3\downarrow \\ \hline 06 \\ -6 \\ \hline 00 \end{array}$$

Finally we get,

Quotient = 12

Remainder = 0

This division may be written as follows:

	Tens	Ones	
	1	2	← Quotient
Divisor → 3)	3 - 3	6	← Dividend
	0	6 - 6	
		0	← Remainder

so, 36 ÷ 3 = 12

EXERCISE-7.1

Divide:

1.	$91 \div 3$	**2.**	$42 \div 6$	**3.**	$56 \div 8$
4.	$48 \div 4$	**5.**	$72 \div 9$	**6.**	$84 \div 5$

7. 63 plants were planted in 7 rows equally . How many palnts are there in each row?

8. I have 96 toffees. If I give 4 toffees to each boy, how many boys will get toffees?

Dividing 3-digit number by a single digit number

Example: Divide 952 by 8

Step I: Write it as $8\overline{)952}$

Step II: Divide Hundreds number (since it is on the extreme left) by 8 (Read the Table of 8 so that you don't exceed 9. 8 ones are 8, 8 twos are 16; 16 is greater than 9) hence it will go one time i.e. Subtract 8 from 9 and write 1 below 8 as remainder.

$$\begin{array}{r} 1 \\ 8\overline{)952} \\ -8 \\ \hline 1 \end{array}$$

Step III: Copy down 5 beside 1, now you get 15; divide it by 8 as you divided 9 by 8 earlier. It will again go one time. Subtract 8 from it and write 7 under 8 as remainder.

$$\begin{array}{r} 11 \\ 8\overline{)952} \\ -8\downarrow \\ \hline 15 \\ -8\downarrow \\ \hline 7 \end{array}$$

Step IV: Copy down 2 beside 7. Now you have 72 to be divided by 8. Do as earlier.
It will go 9 times (8 nines are 72); subtract. You get zero as remainder

Now all the digits have been brought down and nothing more is left to be brought down.

$$\begin{array}{r} 119 \\ 8\overline{)952} \\ -8\downarrow \\ \hline 15 \\ -8\downarrow \\ \hline 72 \\ -72 \\ \hline 0 \end{array}$$

SO DIVISION IS COMPLETE

Answer: Q= 119, R=0

EXERCISE-7.2

Divide and find the Quotient and remainder:

1. 105 ÷ 7	**2.** 375 ÷ 5	**3.** 828 ÷ 9
4. 412 ÷ 6	**5.** 680 ÷ 3	**6.** 984 ÷ 4

Solve:

7. In a gathering on Seeratun-Nabi arrangement for seating 975 students was made. If 5 students sit on one bench, how many benches were required for all the 975 students?

8. 256 bags of wheat were distributed equally among 8 shopkeepers. How many bags did every shopkeeper get?

Division when first digit from left of dividend is smaller than divisor

Example: Divide 425 by 12

Solution:

First we divide 4 Hundred by 12. Since 4 is less than 12, it goes zero times 12x 0 = 0. We write 0 under 4 and subtract; we get 4; now 2 is brought down next to 4. The number becomes 42.

Now divide 42 by 12. The Table goes 3 times as 12 x 3 = 36; write 36 under 42 and subtract we get 6. Now bring down 5 beside 6. The number becomes 65. Now divide 65 by 12. It goes 5 times. 12 x 5 = 60. Write 60 under 65 and subtract. We get 5. Now no more number in the dividend is left to be brought down. Hence division is Complete. The answer is Quotient = 35 Remainder = 5.

```
      035
   12 ) 425
        0↓
      ----
        42
        36↓
      ----
        6 5
        6 0
      ----
        5 Remainder
```

EXERCISE-7.3

Divide and find the quotient and the remainder:

1. 726 ÷ 12	**2.** 266 ÷ 14	**3.** 970 ÷ 10
4. 591 ÷ 11	**5.** 587 ÷ 13	**6.** 387 ÷ 15

Solve:

7. 520 students took part in a rally. They were in groups of 10 students each. Find the number of groups.

8. A book costs Rs. 15. How many books will be purchased for Rs.930?

Division in which zero comes in the middle of quotient

Example: Divide 816 by 4

$$\begin{array}{r} 204 \\ 4\overline{)816} \\ -8 \\ \hline 01 \\ -0 \\ \hline 16 \\ -16 \\ \hline 00 \end{array}$$

Explanation:

Step I :- Divide 8 Hundreds by 4
It goes 2 times.
On subtracting 8 - 8 → 0

Step II: Bring down the next digit i.e. 1
Try dividing 1 by 4. Since 1< 4, it will go only zero times. Write 0 above Tens in quotient and 0 below 1 and subtract 1 – 0 = 1

Ans. Q = 204, R = 0

Step III: Bring down the next digit i.e. 6 next to 1; we get 16. Divide 16 by 4. It goes 4 times. The remainder is zero. Now division is complete.

Simple Method

$$\begin{array}{r} 204 \\ 4\overline{)816} \\ -8 \\ \hline 016 \\ -16 \\ \hline 00 \end{array}$$

Remember :- 1. After bringing down a digit, the new number thus formed is divided by divisor.

2. If this newly formed number is less than divisor, one 0 is put in the quotient and next digit is brought down. Now it is divided as usual.

3. Remainder is ALWAYS less than the Divisor. To check your answer - Multiply Quotient by Divisor and add Remainder. If you get the sum equal to dividend, then your answer is correct.

MISCLLANEOUS EXERCISE-7.4

Divide and find quotient and remainder. Also check your answer:

1. 651 ÷ 4	**2.** 207 ÷ 10	**3.** 432 ÷ 12
4. 380 ÷ 15	**5.** 6864 ÷ 11	**6.** 400 ÷ 14
7. 142 ÷ 7	**8.** 1010 ÷ 10	**9.** 3012 ÷ 6

Solve:

10. On the eve of Eid-ul-Fitr, 3520 rupees was collected as Fitra. If Rs.110 was given to each person, how many persons got the Fitra?

11. You can buy 5 toffees for one rupee. For how many rupees will you get 75 toffees?

12. 360 benches were kept in 15 rooms equally. How many benches are there in each room?

13. 300 men offered Juma' prayer in 12 rows in a mosque. If each row has equal number of men how many men were in each row?

14. 360 students were present in the annual function of a school. If on every bench only 3 students sat, how many benches were needed in all to seat all the students?

15. A packet can hold 6 laddoos. How many packets will be required for 144 laddoos?

16. A shopkeeper charges Rs 13 for a pair of socks. How many pairs of socks will he give for Rs. 1365?

17. A mango seller kept 1260 mangoes in 14 boxes. If each box has equal number of mangoes, how many mangoes are there in every box?

18. For an educational tour Rs. 780 was collected from students. If every student deposited Rs.15, how many students deposited the money?

19. In a dairy farm 8460 litres of milk is obtained from buffaloes. If each buffalo gives 15 litres milk, how many buffaloes are there in the farm?

CHAPTER - 8

Indian Currency

Dear children, you often get money for purchasing toffees, vegetables, fruit, etc. You get it in the form of 50 paise, or one-rupee, two-rupee, five-rupee coins or notes. You recognise them well.

Have you seen coins of 1 paisa, 2 paise, 3 paise, 5 paise, 10 paise, 20 paise, and 25 paise etc. May be many of you haven't seen them. Ask your teacher to show you these old coins if he can arrange.

Your father would have not only seen but also used these coins. Now these coins are not in use.

Coins now in use are – 10 rupees, 5 rupees, 2 rupees, one rupee, and 50 paise.

Notes in use :- 1 rupee, 2 rupees, 5 rupees, 10 rupees, 20 rupees, 50 rupees, 100 rupees, 500 rupees and 1000 rupees.

How many coins and notes have you seen/used

Can you recognise all of them on seeing?

You can also count ten rupees in different coins / notes:

2 coins / notes of 5 rupees = Ten rupees

5 coins / notes of 2 rupees = Ten rupees

10 coins / notes of 1 rupee = Ten rupees

20 coins of 50 paise = Ten rupees

Amount of money:- An amount of money can be expressed in two forms. The first form is called "long form" (i.e. in words) and second form is called "short form" (i.e. in figures).

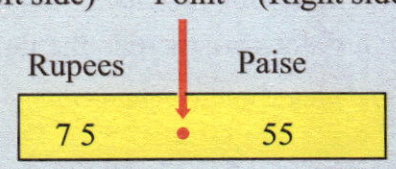
If the cost of one meter polyster is 75 rupees and 55 paise, then we can write it as Rs. 75.55 .

So, long form ➡ 75 rupees and 55 paise

short form ➡ Rs.75.55

The . (point or dot) separates rupees and paise. On right side of the point are paise and on the left side are rupees

(Left side) Point (Right side)



If there are only paise, they are written as follows:

as –	50 Paise	=	Rs. 0.50	75 Paise	= Rs. 0.75
	10 Paise	=	Rs. 0.10	80 Paise	= Rs. 0.80
	5 Paise	=	Rs. 0.05	12 Paise	= Rs. 0.12
				99 Paise	= Rs. 0.99

(Note: In paise place, there must be two digits)

This point is also called **DECIMAL,** since scale of 10 is used in separating rupees and paise.
[You will study more about decimal in next classes.]

Conversion of rupees into paise:

We know that one rupee has 100 paise. So, we convert rupees into paise by multiplying given rupees by 100.

Example1: Convert Rs. 8 into paise.

Solution: we can write,
Rs. 8 = 8x100 paise = 800 paise

Example2: Convert Rs. 12.45 into paise.

Solution: Rs. 12.45 = Rs. 12 and paise 45.
First we convert rupees 12 into paise.
Rs. 12 = 12x100 paise = 1200 paise
Now add the paise 45 to the above paise. we get
Rs. 12.45 = 1200 paise +45 paise = 1245 paise

Or

Simply,

we can convert rupees into paise by removing decimal point from the given amount. For example:-
Rs. 12.45 ➡ After removing decimal ➡ 1245 paise.

Conversion of paise into rupees:-

We know that rupee 1 has 100 paise. Hence, to convert paise into rupees, divide the given paise by 100.

Example 1: Convert 365 paise into rupees.

Solution: Divide 365 by 100. the obtained remainder stand for paise.

Hence, 365 paise = Rs. 3.65

$$\begin{array}{r} 3 \\ 100\overline{)365} \\ -300 \\ \hline 65 \end{array}$$

Or

To convert paise into rupees, simply put a decimal point after two digits from right.

For example: paise 365 = Rs. 3 . 65

Decimal point after two digits from right

Example 2: Convert 2009 paise into rupees.

Solution: Put decimal point after two digits from right-
2009 paise = Rs. 20.09

EXERCISE-8.1

A. Write the following using decimal:

1. 9 rupees 65 paise
2. 11 rupees 2 paise
3. 125 rupees 10 paise
4. 314 rupees 7 paise
5. 817 rupees 52 paise
6. 1007 rupees 87 paise
7. 3738 rupees 9 paise
8. 3011 rupees 64 paise
9. 35 paise
10. 7 paise

B. Write the following in rupees and paise:

1. Rs. 8.95
2. Rs. 33.60
3. Rs. 508.05
4. Rs. 2.04
5. Rs.100.10
6. Rs. 120.20
7. Rs. 359.07
8. Rs.4089.79

C. Change the following into paise:

1. Rs. 9.25
2. Rs. 6.75
3. Rs. 14.15
4. Rs. 20.05
5. Rs. 17.35
6. Rs. 15.50

D. Change the following into rupees:

1. 250 paise
2. 635 paise
3. 745 paise
4. 280 paise
5. 704 paise
6. 771 paise

Addition and Subtraction of Rupees and Paise are as Normal Addition and Subtraction

Addition

Example: For construction of a mosque 472 rupees and 90 paise was collected on the first Friday, 500 rupees on the second Friday and 569 rupees and 45 paise on the third Friday How many rupees was collected in all?

Solution:

First Friday	Rs.	472.90
Second Friday	Rs.	500.00
Third Friday	Rs.	569.45
		Rs. 1542.35

Total Rs. 1542.35 was collected

Explanation: Numbers are arranged in vertical columns as is done in normal addition.

Care is taken that decimal point comes below one another.

Addition starts from Ones place and continues till the last digit.

After Addition is complete, decimal point is put at its place.

The place of Decimal is always after two digits from the right side.

		1	1	1			
Rs.		4	7	2	.	9	0
Rs.		5	0	0	.	0	0
Rs.		5	6	9	.	4	5
Rs.	1	5	4	2	.	3	5

EXERCISE-8.2

1. Find the sum:

(A)

Rs.	P
9	75
+12	15
+ 5	05

(B)

Rs.	P.
84	07
+ 199	10
+ 1915	82

(C)

Rs.	P.
3727	75
+ 225	08
+	02

2. Anwar bought milk for 7 rupees and 75 paise, sugar for 5 rupees and 25 paise and tea for 3 rupees. How much did he spend?

3. Rupees 65300 and 75 paise was spent on the construction of a bridge and 28750 rupees and 50 paise on road construction. How much money was spent on both?

Subtraction

Subtraction is very much similar to Addition. Numbers are arranged in vertical column as in Addition and process of Subtraction is done later. Decimal point is put at its place.

EXERCISE-8.3

Subtract:-

1. Rs. 18 . 75
Rs. 7 . 25

2. Rs. 67 . 92
Rs. 43 . 57

3. Rs. 3112 . 46
Rs. 1379 . 13

4. Rs. 48725 . 18
Rs. 6547 . 39

5. Rs. 8965 . 03
Rs. 3594 . 67

6. Rs. 1712 . 07
Rs. 563 . 25

Example: Mahmood bought a ceiling fan for 575 rupees and 50 paise and paid 364 rupees and 75 paise in cash. How much has he to pay now?

Solution:

borrowed = 100 paise

1 rupee

	Rs.	P.
	574	(100)
Cost of fan	~~575~~	50
Paid cash	– 364	75
Balance	**210**	**75**

Explanation: It is impossible to subtract 75 paise from 50 paise. So borrow rupee 1 from Rs. 575. Since rupee 1 has 100 paise, so we get 150 paise at the place of 50 paise now. After subtraction 75 paise from 150 paise we obtain 75 paise (150 - 75 = 75).

Since we have borrowed 1 rupee from Rs. 575 so we left with Rs. 574 Now subtract Rs. 364 from Rs. 574 and write the result Rs. 210 at the place of rupees.

7. Nabeela has 18 rupees and 70 paise. She lent 9 rupees and 25 paise to her friend. How much does she have now?

8. Children collected 162 rupees and 25 paise for lunch in a picnic. Zubair spent only Rs. 159.50 on lunch. How much money is now left?

9. Amjad purchased a bicycle for Rs. 1288.75 and gave 13 notes of one hundred rupee to the shopkeeper. How much money did the shopkeeper return to Amjad?

10. Masood's brother withdrew Rs. 27619.85 from his account for repair of his house. If Rs. 32540.50 was in his account, how much money is now left in the account?

11. Rashid has Rs. 882.35. He purchased an almirah for Rs. 498.94. How much is left with him now?

12. Salim bought cloth for 1636 rupees and 75 paise and gave 4 notes of 500 rupee. How much did the shopkeeper return to Salim?

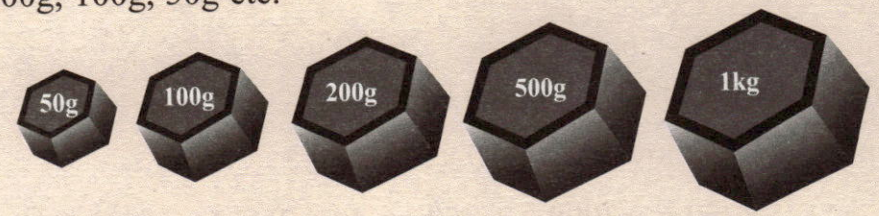
13. What should be added to 125 rupees and 48 paise to make it 264 rupees 25 paise?

CHAPTER - 9

Measurement of Weight

You know that vegetables, wheat, rice, flour , etc. are sold by weighing. To weigh these things we need weights of kilogram, gram, etc.

Go to a grocer's shop and see weights of 1 Kg, 2 Kg, 5 Kg, 10 Kg, 500g, 200g, 100g, 50g etc.



Take a weight of 1 Kilogram and observe it carefully

What do you notice? 1 Kg is written on it. These are 1000 grams.

It means, 1 KILOGRAM = 1000 GRAM

or 1 Kg = 1000 g

Exercise (Oral)

1. 1 Kg = ☐ g **2.** Half Kg = ☐ g

3. Quarter Kg = ☐ g **4.** 1000 g = ☐ Kg

5. 6000 g = ☐ Kg **6.** 7000 g = ☐ Kg

7. A packet of rice weighs 4 Kg and another packet weighs 5 Kg. How much is the weight of the two packets?

Example 1: convert 5 kg into g

Solution: we know that, 1 kg = 1000g

∴ 5 kg = 5 x 1000 g = 5000g

Example 2: Convert 6 Kg 300 g into grams.

Solution:

6 Kg 300 g = 6 Kg and 300 g

6 Kg = 6 x 1000 g

= 6000 g

So 6 Kg 300 g = 6000 g and 300 g

or = 6000 g + 300 g

or = 6300 g

Example 3: Convert 3250 g into kg and g.

Solution: We know that, 1000 g = 1kg.

∴ 3250 g = 3000 g + 250g = 3 kg 250 g

Example 4: Add the following

(i)

Kg	g
15	250
+4	340

(ii)

Kg	g
23	720
+45	155

Solution: Addition starts from grams

(i)

Kg	g
15	250
+4	340
19	590

or 19 kg 590 g

(ii)

Kg	g
23	720
+45	155
68	875

or 68 kg 875 g

Example 5: Subtract

(i)

Kg	g
86	460
-50	275

(ii)

Kg	g
120	900
-95	790

Solution: Subtraction will be start from grams.

(i)

Kg	g
86	460
-50	275
36	185

or 36 kg 185 g

(ii)

Kg	g
120	900
-95	790
25	110

or 25 kg 110 g

Example 6: Majid bought 32 kg 430g fruits and 19 kg 520g sweets. What is the total weight of fruits and sweets together?

Solution:

	kg	g
Weight of fruits	= 32	430
Weight of sweets	= 19	520
Total weight	= 51	950

EXERCISE-9.1

A. Convert into g:

(I) 2 kg 250 g = ...g (ii) 6 kg 815 g = ...g

(iii) 7 kg 75 g = ...g (iv) 5 kg 705 g = ...g

B. Convert into kg and g:

(i) 3075g = ...kg.....g (ii) 7295 g = ...kg.....g

(iii) 9008 g = ...kg .....g (iv) 4890 g = ...kg.....g

C. Add: (Begin addition from gram)

1.

Kg	g
10	200
+ 5	150

2.

Kg	g
25	575
+ 15	050

3.

Kg	g
90	205
+ 42	700

4.

480	350
+ 75	250

5.

44	440
+ 26	512

6.

212	60
+ 58	90

7. Add 80 Kg 125 g and 20 Kg 400 g

8. There are 10 Kg 500 g potato and 6 Kg 250g cauliflower in a basket. What is the total weight of the vegetabes in the basket?

9. Aslam's father bought 25 Kg 750 g wheat and 18 Kg rice from a ration shop. What is the weight of grains bought by him?

D. Subtract: (Begin from grams)

1.

Kg	g
222	675
– 100	350

2.

Kg	g
35	450
– 13	130

3.

Kg	g
42	500
– 28	250

4.

655	400
– 426	265

5.

80	660
– 28	497

6.

55	835
– 10	175

7. Subtract 35 Kg from 50 Kg 280 g.

8. Aslam bought two big watermelons from market. One melon is 8 Kg 500 g and the other is 5 Kg 150 g. What is the difference in weight between the two?

9. Weight of Rashid was 25 Kg 375g. A year later he became 26 Kg 500g. How much did his weight increase?

Multiplication

Example: Find the product

kg	g
6	225
x	4

Solution: first of all multiply g by 4 and write the product 900 at the place of g. After that multiply kg by 4 and write the product 24 at the place of kg. Hence, the product is 24 kg 900 g.

kg	g
6	225
x	4
24	900

or 24 kg 900g

EXERCISE-9.2

Exercise: Find the Product:

1.

Kg	g
2	475
x	2

2.

Kg	g
0	250
x	4

3.

Kg	g
4	125
x	7

4.

Kg	g
9	105
x	8

5.

Kg	g
3	450
x	6

6. In a fair price shop 350 g sugar is given to every adult person. If there are 5 adults in a family, how much sugar will the family get from the shop?

7. 3 Kg of pulse is consumed in a hostel daily. How much pulse will be consumed in 2 weeks?

DIVISION

Example: Divide 750 g by 15.

Solution: We can solve this problem by the simple method of division. Divide 750 by 15, we get quotient 50 and remainder zero.
Hence, the answer is 50g.

$$\begin{array}{r} 50\ g \\ 15\overline{)\ 750\ g} \\ -75 \\ \hline 00 \\ 00 \\ \hline x \end{array}$$

EXERCISE-9.3

Divide: -

1. 994g by 14 **2.** 135 g by 15

3. A passenger has 135 Kg of luggage with him. If 3 Coolies carried the load equally. How much luggage did each Coolie carry?

4. In a large family 3 Kg of rice is consumed daily. For how many days will 90 Kg of rice be sufficient?

Volume

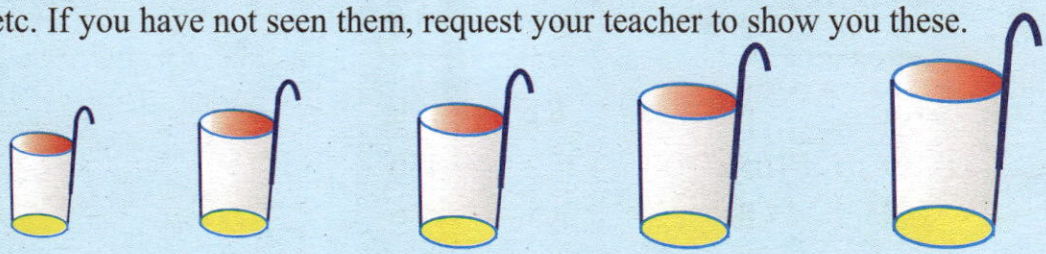
Liquids like milk and oil are sold by measuring their volume with a measure called litre (Short - *l*). Millilitre (Short - *ml*) is smaller than litre.

1 *l* = 1000 *ml*

Half *l* = 500 *ml*

One fourth *l* = 250 *ml*

You might have seen measures of one litre, 500 *ml*, 200 *ml*, 100 *ml*, 50*ml* etc. If you have not seen them, request your teacher to show you these.



50*ml* 100*ml* 200*ml* 500*ml* 1000*ml* or 1*l*

Activity: Take a bucket of water and measure it first by 1 l measure, then by 500ml, 200ml, 100ml measures.

EXERCISE-9.4

(A) Answer the following:

(1) 1 *l* = _____ *ml*

(2) 2 *l* = _____ *ml*

(3) Half a litre = _____ *ml*

(4) One fourth litre = _____ *ml*

(5) A packet of milk measures 500ml. How much will 2 packets measure?

(B) **Add:**

1.

l	*ml*
768	405
+ 79	127

2.

l	*ml*
176	000
+ 216	446

3.

l	*ml*
53	25
+ 37	63

4.

l	*ml*
589	531
+ 316	466

5.

l	*ml*
606	444
+ 290	220

6.

l	*ml*
212	202
+ 303	136

7. Add 100*l* 250*ml* and 75*l* 240 *ml*. (write in column as above)

8. Some good persons distributed 120*l* 400 *ml* milk among weak children and 95*l* 550 *ml* milk among poor children. How much milk did they distribute in all?

9. Tanveer's mother prepared Kheer from 3*l* 500*ml* milk and icecream from one and a half litre milk. How much milk did she use?

10. Mohan purchased 8l oil. Then he purchased 8*l* 500 *ml* more oil. How much oil did he purchase in all?

(C) Subtract:

1.

l	*ml*
12	638
– 5	165

2.

l	*ml*
9	380
– 2	175

3.

l	*ml*
5	270
– 4	150

4.

l	*ml*
66	630
– 33	402

5.

l	*ml*
50	25
– 40	12

6.

l	*ml*
65	460
– 40	225

7. Subtract 2*l* 144 *ml* from 6*l* 325 *ml*.

8. A shopkeeper had 60 *l* 750 *ml* edible oil. He sold 8*l* 150 *ml* from it. How much oil is now left?

9. A pitcher had 50*l* 500 *ml* water. A ball struck the pitcher and broke it. Now it has only 5*l* 200 *ml* Water. How much water is spilled over?

(D) Multiply:

1.

l	*ml*
4	450
x	2

2.

l	*ml*
8	225
x	4

3.

l	*ml*
12	300
x	3

4.

l	*ml*
25	215
x	3

5.

l	*ml*
8	40
x	6

6.

l	*ml*
4	125
x	5

7. 15 *ml* of honey is supplied in a small bottle. How much honey will there be in 12 such bottles?

8. 200 *ml* kerosene oil is consumed in a stove daily. How much oil will be consumed in 5 days?

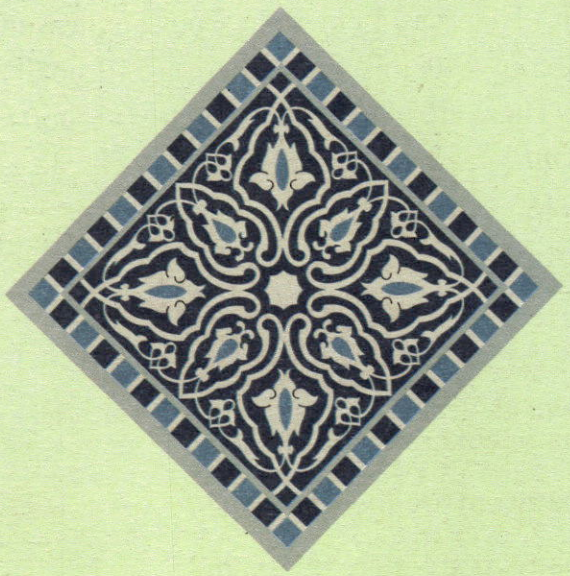
9. The petrol tank of a car has 35*l* 120 *ml* petrol. How much petrol will be there in 4 such tanks?

(E) Divide:

1. 615 *l* by 15
2. 45 *ml* by 3
3. 392 *ml* by 7
4. 280 *ml* by 5

5. A large pot had 1250 *ml* of milk. It was packed in 5 equal packets. How much milk is there is each packet?

6. 3500 *l* kerosene oil was divided equally in 7 canisters. How much oil is there in each canister?



CHAPTER - 10

Measurement of Length

You might have seen a tailor taking measurement of your shirt and trousers using a long tape. This tape is called Inch Tape since it bears marks of inch. Some tapes also bear marks of centimetre and millimetre. You have used a 6-inch scale. It has marking from 0 to 15 at regular spacing. This is a 15cm scale.

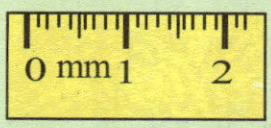
A clothmerchant uses a metallic rod to measure cloth. It is called Meter since it is one metre long.

One metre = 100 centimetre

1 m = 100 cm

[in short, metre = m & centimetre = cm]

A playground, house and garden, etc. are also measured by a metre scale. Observe your scale. This is a 15 cm scale. You can measure small objects as pen, pencil and copy with this scale. There are 10 small marks between any two numbers. These are marks of millimetre (in short - mm)



1c m = 10 mm

EXERCISE-10.1

A. **(1)** How many cm are there in 1 m? =

(2) How many cm are there in 3 m? =

(3) How many m are there in 50 cm? =

(4) How many mm are there in 2 cm? =

B. Add:

1.

m	cm
339	79
+ 25	19

2.

m	cm
9	50
+ 7	25

3.

m	cm
15	85
+ 8	10

4.

m	cm
375	35
+ 97	56

5.

m	cm
175	40
+ 328	37

6.

m	cm
105	64
+ 97	36

7. Some labours made 27m 35cm road on the first day and 31m 60cm on the second day. How long road did they make on both the days?
8. There are two pieces of green cloth in a shop. One piece measures 29cm and another 24m 20cm. What is the total length of the two pieces?
9. Add 64m 67cm to 24m 8cm.

C. Subtract:

1.

m	cm
38	40
− 12	25

2.

m	cm
324	47
− 209	31

3.

m	cm
45	32
− 14	10

4.

m	cm
447	85
− 258	19

5.

m	cm
307	84
− 135	55

6.

m	cm
600	77
− 227	46

7. 1m 95cm cloth is required for the frock of Tayyaba and 1m 5cm cloth is required for her sister. How much more cloth is required for Toyyab' s frock?

8. Shadab had 80m 75cm rope for his cot. He used 37m 34cm of rope in the cot. How much rope is now left?

9. Ayesha had 32m 75cm rope. She made a bag with some of the rope. Now she has only 2m 56cm of rope. How much rope did she use in making the bag?

D. Multiply:

1.

m	cm
15	12
x	8

2.

m	cm
24	9
x	5

3.

m	cm
13	20
x	4

4.

m	cm
9	3
x	15

5.

m	cm
8	5
x	9

6.

m	cm
25	3
x	7

7. A 4m 16cm long chain is required for one bag. How long chain will be required for 5 such bags?

8. 1m 5cm curtain is needed for a window and 3m curtain is needed for a door. How much curtain is needed for 2 windows and 2 doors?

9. In taking one round of a playground one has to walk 460m. How long will Hamid walk to make 8 rounds of the playground?

F. Divide:

1. 816 cm by 6
2. 64 cm by 4
3. 765 cm by 9
4. 95 cm by 5

5. 696 m of rope was cut into equal pieces of 12 m length. Find the number of pieces.
6. 7 Tent Camps are made from 5418m canvas. How much canvas is used in each tent?
7. 5 m cloth is used in a veil (Naqab). How many veils will be prepared with 75m cloth?

Wonderful Number 1089

Ask your friend to write secretly any 3-digit number in his note book in a manner that the difference in Ones and Hundreds digit is 2 or more than 2. E.g. 317

Now ask him to exchange digits of Ones and Hundreds and note down the new number ➡ 713.

Now ask him to find the difference between the two. 713–317=396
Ask him to exchange digits of Ones and Hundreds once again ➡ 693

Now ask him to add these last two numbers = 396+693=1089

[You may write 1089 on separate paper and give it to your friend before asking him to do all these operation. He will be surprised that you have already told the answer without knowing the number secretly written by your friend.]

Secret of the puzzle: The result will always be 1089 irrespective of what number is taken by your friend, as long as he follows your conditions.

CHAPTER - 11

Measurement of Time

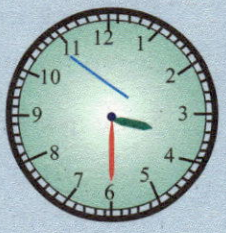
Dear Children!

You might have seen a clock. A clock has two hands, one big and one small. The big hand shows minute and the small hand shows hour . Some clocks have three hands, one of which moves so fast that it is seen moving.

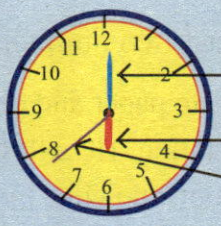
[The teacher should bring two clocks, one with 'seconds' hand and another without 'seconds' hand and show them to students. Ask the students to recognise the hands of clocks.]

Some clocks, mostly electronic, show time by digits. Thus 07:15:45. First two digits show hours; second two digits show minute and last two digits show seconds. Hour, Minute and Second are separated by either a single dot (.) or a colon (:).

- Observe the dial of a clock. It shows 12 numbers written in a circle. There are 5 divisions between any two numbers. The number shows hours and small divisions show minute.
- When the big hand is on 12 and the small hand on 4, we say it is 4 O'clock. Similarly when the small hand points at 6 and the big hand points at 12, we say it is 6 O'clock.

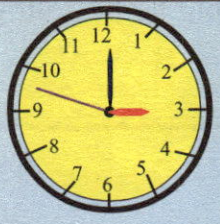


4 O'clock



6 O'clock

Example: Look at the folllowing picture of clock. It shows 3 O'clock.

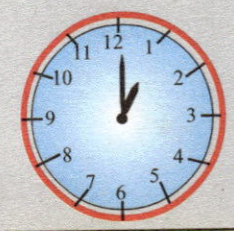


The minute hand is on 12.

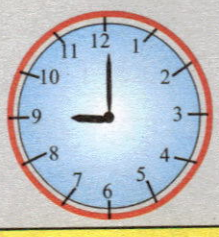
The hour hand is on 3.

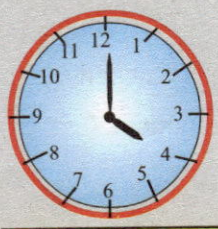
EXERCISE-11.1

1. See the picture of the clocks and write time under each clock.



O'clock





2. Where will be the hour and the minute hands at –

	Hour Hand at	Minute Hand at
2 O'clock		
7 O'clock		
12 O'clock		
9 O'clock		

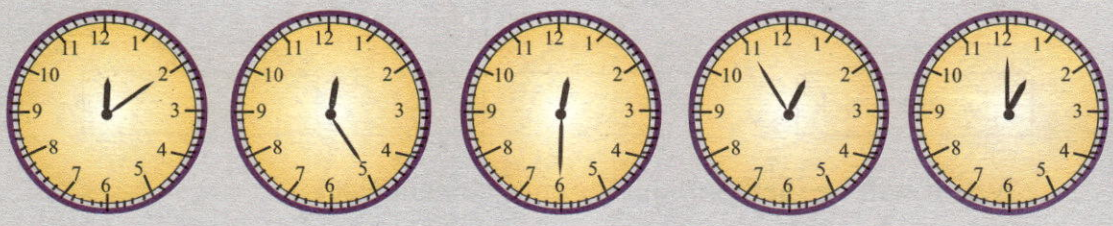
- See the dial of the clock carefully. It has 5 divisions between any two numbers. These show minutes.

Picture showing 60 marks of minutes

Hour Hand takes an hour to move from one number to another, say from 1 to 2 or 4 to 5.

- See the clock. Where is the Hour Hand? Where is the minute hand? What is the time? It is 5 minutes past 12 or simply 12:05.
When the minute hand moves on 2, it becomes 10 minutes past 12 or simply 12:10 (see figure (i)

When the minute hand moves on 5, it is 25 minutes past 12 or simply 12:25 (see figure (ii)
When the minute hand reaches 6, it is 30 minutes past 12 or 12:30 (see figure (iii)
When the minute hand reaches 11, it is 55 minutes past 12 or 12:55 (see figure (iv)
When the minute hand reaches 12 again i.e. it has made one full round of the dial, it is 60 minutes past 12 or 12:60. But now you will observe that Hour Hand has reached one (1). It is 1 O'clock. (see figure (v)



(i) (ii) (iii) (iv) (v)

You have seen that when the hour hand moves from 12 to 1 or 1 number the minute hand takes one full round in the same time makes an hour. One full round also means 60 small parts (i.e. 12x5 = 60)

1 Hour = 60 Minutes

To know how many minutes, simply multiply the number by 5 at which is the minute hand.

Example:

Hour Hand is between 4 and 5 and minute Hand is on 8 -

4 Hours	40 Minutes

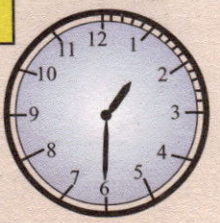
Express in hours and minutes if - Also draw picture to show the time.

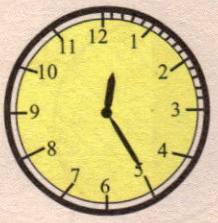
1. Hour hand is between 6 and 7; minute hand is at 3 =
2. Hour hand is between 10 and 11; minute hand is at 9 =
3. Hour hand is at 7 and minute hand at 1 =
4. Hour hand is between 6 and 7 and minute hand at 10 =

EXERCISE-11.2

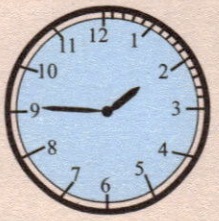
See the picture of the clock.

1. Where is the Hour Hand = between ☐ and ☐
2. Where is the minute hand = at ☐
3. What is the time = ☐ past ☐
4. Read out the times from the following clocks.

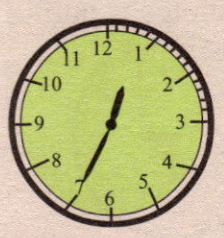




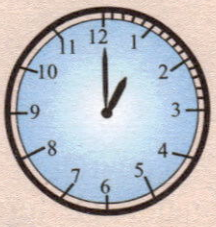
☐ past ☐



☐ past ☐



☐ past ☐

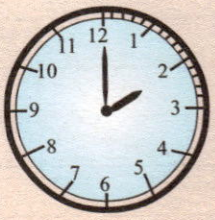


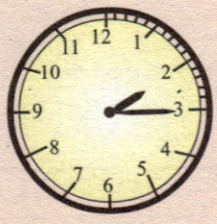
The minute hand reached 12 and the hour hand moved from 12 to 1.

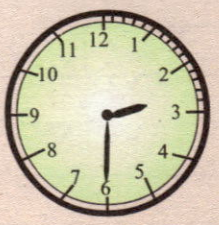
The minute hand takes 60 minutes to complete one full round (you can see 60 small divisions on a big clock dial) of the dial and the hour hand takes 60 minutes (or one hour) in moving from one number to another.

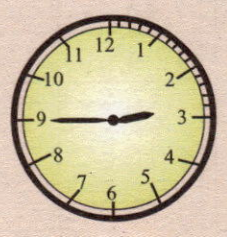
60 minutes	= 1 Hour
1 Hour	= 60 minutes

Concept of 'a quarter to', 'a quarter past' and 'half past.' See the following clocks:

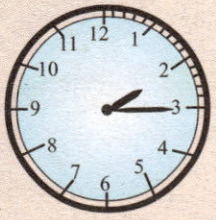


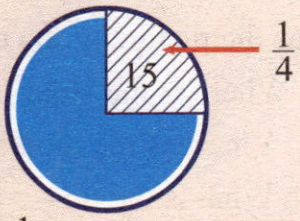






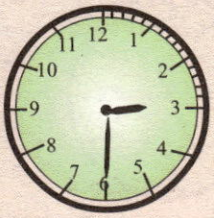
15 minutes past 2 is also called a quarter past two (since 15 minutes is a quarter of 60).

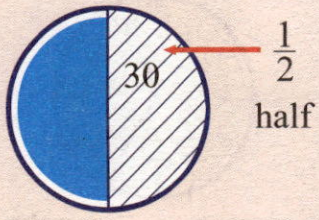




$\frac{1}{4}$ or a quarter

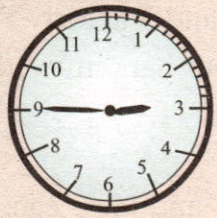
30 minutes past 2 is also called half past two as 30 minutes is half of 60.



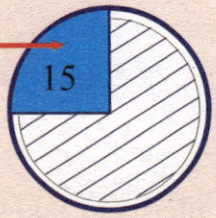


half

45 minutes past 2 is also called a quater to 3 as only 15 minutes or a quater is left to complete 3 hours.



Or a quarter remaining before 3 O'clock



Express the following time as 'half past', a quarter past' or 'a 'quarter to'

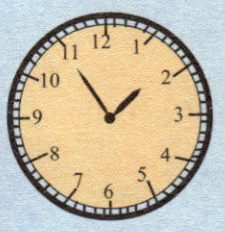
1.	1:45	
2.	2:15	
3.	9:30	
4.	8:15	
5.	8:45	
6.	7:45	
7.	12:45	
8.	1:30	
9.	6:15	
10.	7:45	

Draw picture of the clocks to show the following time:

3:30 6:45 7:15 8:45 9:00 10:15

EXERCISE-11.3

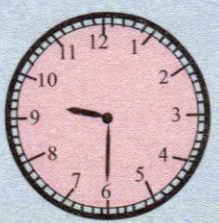
1. Write the time under the following clocks:



Small hand between ☐ and ☐

Big hand at ☐

Time ☐ Minute Past ☐



Hour hand between ☐ and ☐

Minute hand at ☐

Time ☐ minute past ☐

Hour hand between ☐ and ☐

Minute hand at ☐

Time ☐ minutes past ☐

2. Where will the Hour Hand and Minute Hand be at –

(i)	10 minutes past 7
(ii)	40 minutes past 4
(iii)	20 minutes past 11
(iv)	20 minutes past 12

3. If it is a quarter past two now, what will be the time:
   (i) after 10 minutes (ii) after 30 minutes

4. Rashid leaves home at half past nine and reaches school at a quarter to 10. What time does he take to reach the school?

5. Azan was called at a quarter to five and after half an hour Jamaat was started. Tell at what time jamaat was started?

Days and Hours

You know, when there is sunlight it is day and when the sun sets it is night. One day and one night make one full day.

There are 24 hours in a day

1 Day = 24 Hours

Example: How many hours are there in 2 days?

Solution: One day = 24 Hours
Two days = 2 x 24
48 Hours

EXERCISE-11.4

How many hours are in :

1. 4 days _____ hours
2. 6 days _____ hours
3. 3 days and 2 hours _____ hours
4. 5 days and 8 hours _____ hours
5. 7 days and 5 hours _____ hours
6. 9 days and 4 hours _____ hours

Days, Weeks, Months and Year

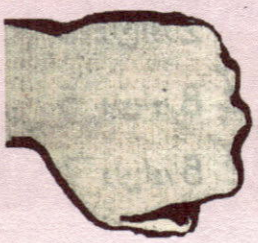
One week has seven days: Sunday, Monday, Tuesday, Wednesday Thursday, Friday and Saturday.

One week	=	7 days
One month	=	30 days
One year	=	12 months

Name of Christian (also called Solar) months and number of days in each of them.

January	31
February	28 or 29
March	31
April	30
May	31
June	30
July	31
August	31
September	30
October	31
November	30
December	31

There is a simple thumb rule to know (and also remember) the number of days in any month. Close your fist and count month on the ridge and furrow of your fingers.



The month that comes on ridge has 31 days. Rest 30 days. Always start from January. Second round begins from the month of August.

February and Leap year

February is a special month which has 28 days for 3 years and on every 4th year it has 29 days. The year in which February has 29 days is always divisible by 4 and is called LEAP YEAR. In that year there are 366 days in a year instead of 365 days.

Leap year	
Jan	31
Feb	29
Mar	31
Apr	30
May	31
June	30
July	31
Aug	31
Sept	30
Oct	31
Nov	30
Dec	31
Total	366

Non-Leap year	
Jan	31 days
Feb	28 days
Mar	31 days
Apr	30 days
May	31 days
June	30 days
July	31 days
Aug	31 days
Sept	30 days
Oct	31 days
Nov	30 days
Dec	31 days
Total	365 days

Leap years are 2000, 2004, 1996, 1992, 1988, 1984, 1980, 1976, 1972, 1968

all are divisible by 4

$$\frac{2000}{400} = 5$$

(Note: century year should be divisible by 400 and not by 4)

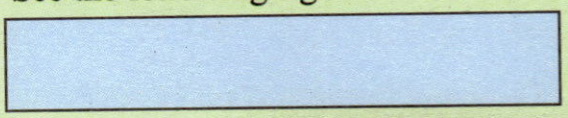
EXERCISE-11.5

1. How many days are there in the month of August? ____ days
2. How many days are there in the month of November? ____ days
3. Which month of the year is June? ____
4. Which is the 11th month of the year? ____ months
5. How many months have 31 days? ____ months
6. How many months have 30 days? ____
7. In 1936 February had only? ____ days

CHAPTER - 12

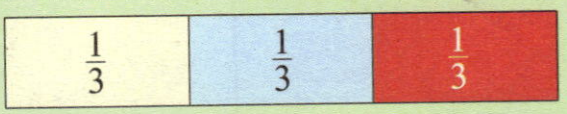
Fractional Numbers

See the following figures:

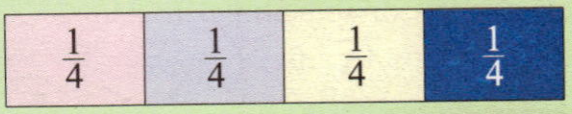


1 (One) or whole

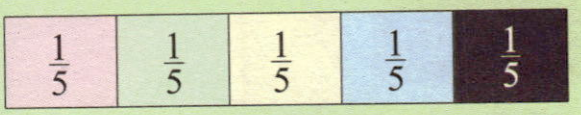
$\frac{1}{2}$ or Half 1 divided into 2 parts



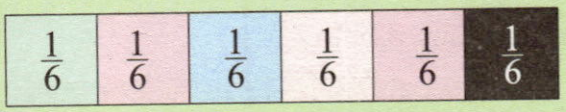
$\frac{1}{3}$ or 1 divided into 3 parts



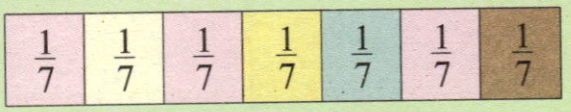
$\frac{1}{4}$ or 1 divided into 4 parts



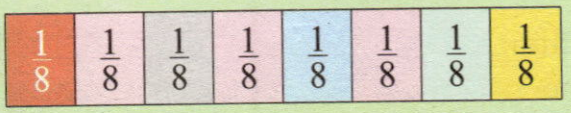
$\frac{1}{5}$ or 1 divided into 5 parts



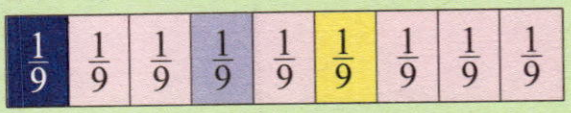
$\frac{1}{6}$ or 1 divided into 6 parts



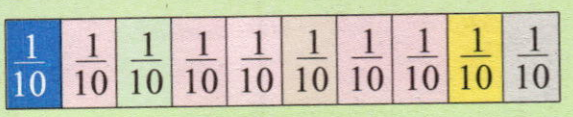
$\frac{1}{7}$ or 1 divided into 7 parts



$\frac{1}{8}$ or 1 divided into 8 parts



$\frac{1}{9}$ or 1 divided into 9 parts



$\frac{1}{10}$ or 1 divided into 10 parts

$\frac{1}{2}$ or One-Half
$\frac{1}{3}$ or One-third
$\frac{1}{4}$ or One-fourth

$\frac{1}{5}$ or One-fifth
$\frac{1}{6}$ or One-sixth
$\frac{1}{7}$ or One-seventh

$\frac{1}{8}$ or One-eighth
$\frac{1}{9}$ or One-ninth
$\frac{1}{10}$ or One-tenth

Consider the fraction "$\frac{1}{5}$". The number written above the bar (——) is called Numerator. It represents the thing or number which is divided. And the number written under the bar (—) is called Denominator. It represents the number of parts into which the number written above has been divided.

taken parts ® $\frac{1}{5}$ ← Numerator
Symbol of fraction (— bar) also read as upon
Total parts ® ← Denominator

$\frac{1}{5}$ represents one part taken from 5 equal parts of something. It also tells the one (whole) has been divided into 5 parts.

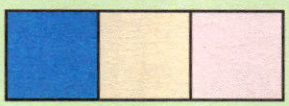
Similary

$\frac{1}{4}$ represents one part taken from 4 equal parts of something. It also represents that one (whole) has been divided into 4 parts.

EXERCISE-12.1

Draw pictures to represent the following as shown below

$\frac{1}{3}$ =



$\frac{1}{5}$ =

$\frac{1}{7}$ =

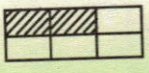
$\frac{1}{9}$ =

$\frac{1}{10}$ =

$\frac{1}{12}$ =

EXERCISE-12.2

1. Fill in the blanks. First one is done for you.

SN.	Shapes	Numerator	Denominator	Fraction	Read as
(i)		1	4	1/4	One upon Four or One by Four
(ii)					
(iii)					
(iv)					

2. Write the Numerators in the following fractional numbers:

(i) $\frac{4}{7}$ (ii) $\frac{5}{9}$ (iii) $\frac{1}{12}$ (iv) $\frac{13}{22}$

3. Write the Denominators in the following fractional numbers:

(i) $\frac{1}{3}$ (ii) $\frac{3}{5}$ (iii) $\frac{7}{11}$ (iv) $\frac{15}{17}$

4. Write as fractional numbers

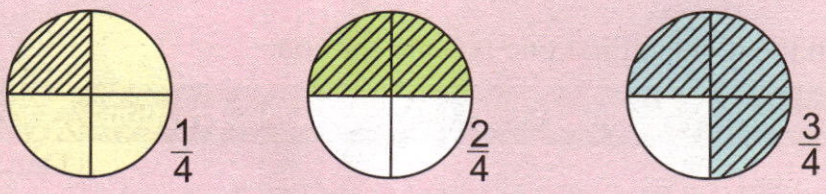
(i) Two-thirds (ii) Three-fourths (iii) One-third
(iv) Four-eights (v) Three-sevenths (vi) 5 upon 8
(vii) Seven upon ten (viii) One-half (ix) Three-twelfth

5. Hamid had 10 rupees. He spent 3 rupees. Express it in fractional number.

6. What fraction is 17 marks out of 25.

Like fractions:

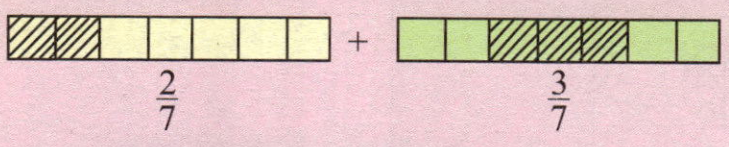
Fractional numbers with equal denominators are called like fractions.



Look at the above pictures. $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$ These are fractions whose denominators are equal (4)

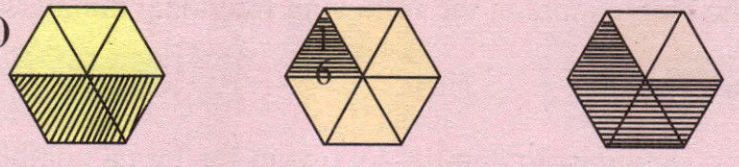
Addition of Like fractions:

Example (1)



$= \frac{5}{7}$

Example (2)



$\frac{3}{6} + \frac{1}{6} = \frac{4}{6}$

Example (3)

Add $\frac{3}{10}$ and $\frac{4}{10}$

$$\frac{3}{10} + \frac{4}{10} = \frac{3+4}{10} = \frac{7}{10}$$

While adding like fractions, we add numerators of the fractions and write denominator as it is.

EXERCISE-12.3

1. Sort out fractions with equal denominators and add them.

(i) $\frac{3}{5}, \frac{4}{5}, \frac{2}{6}, \frac{7}{5}, \frac{1}{4}$ (ii) $\frac{4}{7}, \frac{2}{7}, \frac{5}{9}, \frac{5}{7}, \frac{7}{7}$

(iii) $\frac{8}{9}, \frac{8}{7}, \frac{8}{5}, \frac{4}{9}$

2. Fill in the blanks.

(i) $\frac{1}{6} + \frac{3}{6} = \frac{1+3}{6} = \frac{\square}{6}$

(ii) $\frac{2}{5} + \frac{1}{5} = \frac{\square+\square}{5} = \frac{\square}{5}$

(iii) $\frac{4}{7} + \frac{2}{7} = \frac{\square+2}{\square} = \frac{\square}{7}$

(iv) $\frac{2}{11} + \frac{5}{\square} = \frac{\square+\square}{11} = \frac{\square}{11}$

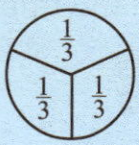
3. Add: (i) $\frac{2}{9} + \frac{2}{9}$ (ii) $\frac{4}{15} + \frac{2}{15}$

(iii) $\frac{2}{5} + \frac{1}{5}$ (iv) $\frac{6}{11} + \frac{3}{11}$

(v) $\frac{5}{13} + \frac{3}{13}$

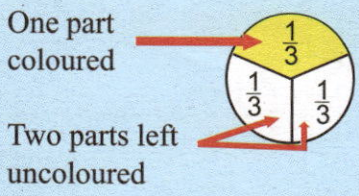
Subtraction of like fractions:-

Example-1:



There are three $\frac{1}{3}$ parts to make one whole. We write it as $\frac{1}{3}$

If we colour one ($\frac{1}{3}$) part, how much will be left?



Example-2:

Each part of the strip is $\frac{1}{6}$. 6 parts together make $\frac{6}{6}$ or whole.

How many parts are there?

Shaded 4 parts or $\frac{4}{6}$ shaded. Of these 4 shaded parts 3 have been cut. How many shaded parts are left now?

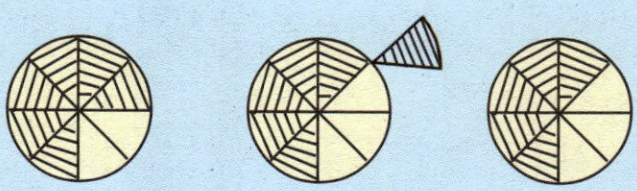
3 parts cut 1 part left

Parts left.

See $\frac{4}{6} - \frac{3}{6} = \frac{4-3}{6} = \frac{1}{6}$

one part (or $\frac{1}{6}$) left.

Example-3:



$\frac{6}{8}$ $-$ $\frac{1}{8}$ $=$ $\frac{5}{8}$

Example:4 $\frac{6}{8} - \frac{1}{8} = \frac{6-1}{8} = \frac{5}{8}$

While subtracting like fractions we subtract Numerator of second fraction from the numerator of first fraction and write denominator as it is.

EXERCISE-12.4

1. Fill in the blanks:

(i) $\frac{2}{5} - \frac{1}{5} = \frac{2-1}{5} = \frac{\square}{5}$

(ii) $\frac{4}{9} - \frac{3}{9} = \frac{4-\square}{9} = \frac{\square}{9}$

(iii) $\frac{7}{11} - \frac{2}{11} = \frac{\square - \square}{11} = \frac{\square}{11}$

(iv) $\frac{15}{19} - \frac{4}{19} = \frac{15-4}{\square} = \frac{\square}{19}$

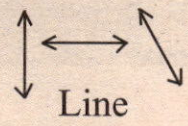
2. Find the diference of the following like fractions:

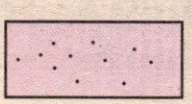
(i) $\frac{13}{17} - \frac{5}{17}$ (ii) $\frac{25}{41} - \frac{10}{41}$ (iii) $\frac{15}{12} - \frac{10}{12}$

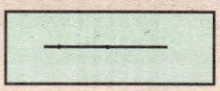
(iv) $\frac{4}{7} - \frac{1}{7}$ (v) $\frac{9}{25} - \frac{5}{25}$ (vi) $\frac{12}{19} - \frac{6}{19}$

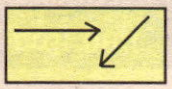
CHAPTER - 13 Geometrical Shapes

Look at the following figures and learn them.

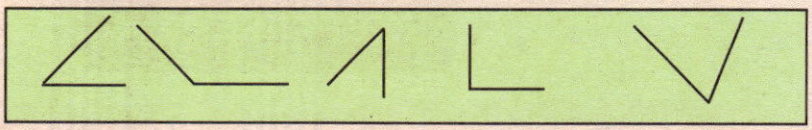

Line


Point


Line segment

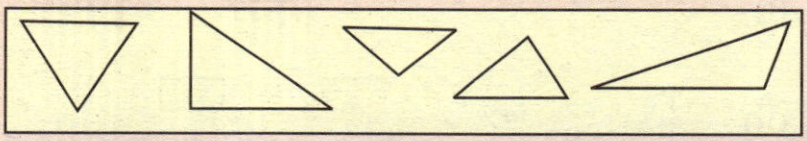

Ray

Angles

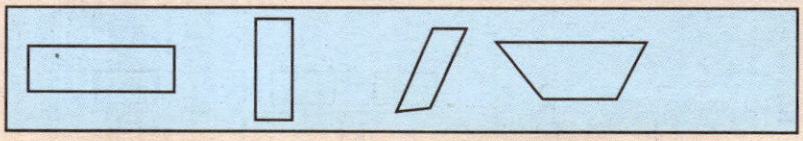


A closed curve which does not cross itself is called a simple closed curve. Here are some closed curves.

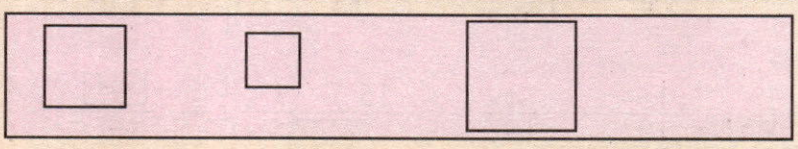
Triangles



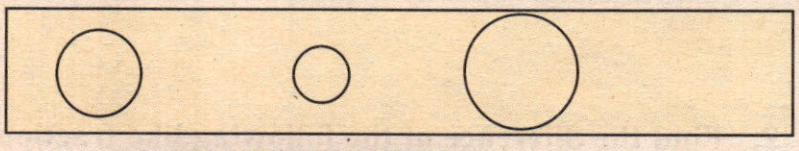
Rectangles



Squares

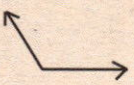


Circles

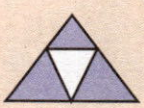


EXERCISE-13

1. Name the Shapes: (i) (ii) (iii) (iv)

(v) (vi) (vii) (viii) (ix) 

2. How many traingles are there in the following figures:

(i)  (ii)